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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/714,090

11/14/2003

Peter J. Nicklas

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EXAMINER

ELVE, MARIA ALEXANDRA

ART UNIT

PAPER NUMBER

1725

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/714,090

Applicant(s)

NICKLAS, PETER J.

Examiner

M. Alexandra Elve

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (USPN 5,861,605) in view of Nemoto et al. (USPN 3,855,015).

Ogawa et al. discloses a flux cored welding wire with a stainless steel sheath. The core contains Al_2O_3 , CaCO_3 , CaF_2 , MgO , Na_2O_3 and other compounds and elements. The flux ratio ranges from 23 to 25 wt%. The combined amounts of Al_2O_3 and Na_2O_3 are about 1.5 wt%.

Ogawa et al. does not teach combined amounts of Al_2O_3 and Na_2O_3 of 14 wt%.

Nemoto et al. discloses the submerged arc welding of a steel product. The flux used in welding is a 4:1 weight ratio of (i) SiO_2 (16wt%), Al_2O_3 (16wt%), Ca (21wt%), MnO (31wt%), CaF_2 (7wt%), Fe_2O_3 (4wt%), & Na_2O_3 (3wt%) and (ii) CaCO_3 (2wt%), CaF_2 (40wt%), Mn (15wt%), & Fe-Ti (25wt%). Thus in the combined fluxes the total Al_2O_3 and Na_2O_3 is approximately 15.2 wt%.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the Al_2O_3 and Na_2O_3 amounts as taught by Nemoto et al. in the Ogawa

Art Unit: 1725

et al. system because they are both drawn to submerged arc welding of similar materials.

The exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; however, the prior art compositions closely approximate applicant's claimed invention. It has been held that one of ordinary skill in the art at the time of the invention would have considered the claimed compositions to have been obvious because close approximation in a composition is considered to establish a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, *Titanium Metals v. Banner* 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. and Nemoto et al., as stated in the above paragraph and further in view of Arikawa et al. (USPN 3,531,620).

Ogawa et al. does not teach the presence of Fe, FeMg or FeSi.

Arikawa et al. discloses an arc-welding electrode, which has a cylindrical steel casing. The powdered core may contain MgCO_3 , CaCO_3 , Al-Mg, Al_2O_3 , Na_2O , MgO , ferrous powder, CaF_2 , Mg powder, Fe-Si and other compounds and elements. It would have been obvious to one of ordinary skill in the art at the time of the invention to use ferrous powder and Fe-Si, as taught by Arikawa et al. in the Ogawa et al. system because the iron (ferrous) part is a metallic component of the welded joint and the Si compounds are known deoxidizers which mitigate detrimental oxidation effects in the welded joint.

Art Unit: 1725

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

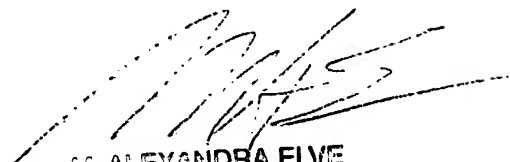
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

February 20, 2007.


M. ALEXANDRA ELVE
PRIMARY EXAMINER